

# SEQUENCE LISTING

<110> EVANS, Donald L. et al.

<120> Novel Teleost Derived Antimicrobial Polypeptides

<130> G25-085US Nat

<140> US 10/588,417

<141> 2005-02-18

<150> PCT/US05/05398

<151> 2005-02-18

<150> US 60/545,370

<151> 2004-02-18

<150> US 60/623,909

<151> 2004-11-01

<160> 32

<170> PatentIn version 3.4

<210> 1

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

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1 5 10 15

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
20 25 30

<210> 2

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<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 2

Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
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<210> 3

<211> 203  
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 <213> Ictalurus punctatus

<400> 3

Met Ser Ala Gln Ala Glu Glu Thr Ala Pro Glu Ala Ala Ala Pro Val  
 1 5 10 15

Gln Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala  
 20 25 30

Lys Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly  
 35 40 45

Pro Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly  
 50 55 60

Glu Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys  
 65 70 75 80

Val Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser  
 85 90 95

Ile Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu  
 100 105 110

Gly Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg  
 115 120 125

Thr Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys  
 130 135 140

Lys Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val  
 145 150 155 160

Lys Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala  
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Asp Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys  
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Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr  
 195 200

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<212> DNA
<213> Ictalurus punctatus

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ccaaaaagaa gggacccgcc agtaaagcaa agcctgcctc tgcagaaaaa aagaacaaaa      180
agaagaaagg gaaagggccc ggaaagtaca gccagctggg gatcaatgct atccaaacgc      240
tgggagagag aaacggctcg tctcttttta agatctacaa cgaggcgaag aaagtgaact      300
ggtttgacca gcagcacggg cgcgtgtacc tccgctactc catccgcgcg ctgctgcaga      360
acgacacgct cgtgcaggtg aagggctctgg gcgccaacgg ctcttcaag ctcaacaaaa      420
agaagttcat cccagaacc aagaagagct ctgtaaagcc gagaaagact gcgaaaccga      480
ccaaaagcc agccaaaaaa gcagcgaaga agaagaaaag ggtcagcggc gtgaagaagg      540
cgactcccc cccagagaaa acctccaaac ccaagaaagc ggataaaagt ccagccgtct      600
ctgccaagaa ggcgagcaag cccaagaaag ctaaacagac aaaaaagact gctaagaaga      660
cttaaaacgt ttatattctg catgctttgt gcattaagca ttgcactgcg ggtaaactgc      720
acgctttctg atcgcagttc attaagtagg atatgcacag tgtttaacca agtgtgcaag      780
tcactctggg ctcaatgttt tactgatgta accacatgta aataactgta caaagaagga      840
aacaatcact tttgtaacgt ctgctttggt attatttctt ttctactagt tagctaaaat      900
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<210> 5
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<212> DNA
<213> Ictalurus punctatus

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<220>
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<222> (54)..(662)
<223> ncamp-1 nucleic acid and protein sequence

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<400> 5
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Pro	Ser	Gln	Pro	Ala	Ala	Lys	Lys	Lys	Gly	Pro	Ala	Ser	Lys	Ala	Lys	
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cct	gcc	tct	gca	gaa	aaa	aag	aac	aaa	aag	aag	aaa	ggg	aaa	ggg	ccc	200
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gga	aag	tac	agc	cag	ctg	gtg	atc	aat	gct	atc	caa	acg	ctg	gga	gag	248
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Lys	Gln	Thr	Lys	Lys	Thr	Ala	Lys	Lys	Thr							
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<210> 6

<211> 203

<212> PRT

<213> Ictalurus punctatus

<400> 6

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1 5 10 15

Gln Pro Ser Gln Pro Ala Ala Lys Lys Lys Gly Pro Ala Ser Lys Ala  
20 25 30

Lys Pro Ala Ser Ala Glu Lys Lys Asn Lys Lys Lys Lys Gly Lys Gly  
35 40 45

Pro Gly Lys Tyr Ser Gln Leu Val Ile Asn Ala Ile Gln Thr Leu Gly  
50 55 60

Glu Arg Asn Gly Ser Ser Leu Phe Lys Ile Tyr Asn Glu Ala Lys Lys  
65 70 75 80

Val Asn Trp Phe Asp Gln Gln His Gly Arg Val Tyr Leu Arg Tyr Ser  
85 90 95

Ile Arg Ala Leu Leu Gln Asn Asp Thr Leu Val Gln Val Lys Gly Leu  
100 105 110

Gly Ala Asn Gly Ser Phe Lys Leu Asn Lys Lys Lys Phe Ile Pro Arg  
115 120 125

Thr Lys Lys Ser Ser Val Lys Pro Arg Lys Thr Ala Lys Pro Thr Lys  
130 135 140

Lys Pro Ala Lys Lys Ala Ala Lys Lys Lys Lys Arg Val Ser Gly Val  
145 150 155 160

Lys Lys Ala Thr Pro Pro Pro Glu Lys Thr Ser Lys Pro Lys Lys Ala  
165 170 175

Asp Lys Ser Pro Ala Val Ser Ala Lys Lys Ala Ser Lys Pro Lys Lys

180

185

190

Ala Lys Gln Thr Lys Lys Thr Ala Lys Lys Thr  
 195 200

<210> 7  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Peptide

<400> 7

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 1 5 10 15

Gly Gly Gly Gly  
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<210> 8  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Peptide

<400> 8

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 1 5 10 15

Cys Gly Thr Thr  
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<210> 9  
 <211> 20  
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<220>  
 <223> Synthetic Peptide

<400> 9

Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys Cys  
 1 5 10 15

Cys Cys Cys Cys  
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<210> 10  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Peptide

<400> 10

Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala  
1 5 10 15

Ala Ala Ala Ala  
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<210> 11  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic Peptide

<400> 11

Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr  
1 5 10 15

Thr Thr Thr Thr  
20

<210> 12  
<211> 20  
<212> PRT  
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<220>  
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<400> 12

Thr Gly Cys Thr Gly Cys Thr Thr Gly Thr Gly Cys Thr Thr Gly Thr  
1 5 10 15

Gly Cys Thr Thr  
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<210> 13  
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 <212> PRT  
 <213> Danio rerio

<400> 13

Met Pro Ala Val Val Glu Glu Ser Ala Pro Ala Pro Ala Pro Ala Pro  
 1 5 10 15

Ala Glu Lys Lys Ala Lys Pro Ala Val Ala Ala Ser Pro Ala Lys Lys  
 20 25 30

Lys Lys Lys Lys Ser Lys Gly Pro Gly Lys Tyr Ser Lys Leu Val Thr  
 35 40 45

Asp Ala Ile Arg Thr Leu Gly Glu Lys Asn Gly Ser Ser Leu Phe Lys  
 50 55 60

Ile Tyr Asn Glu Ala Lys Lys Val Ser Trp Phe Asp Gln Lys Asn Gly  
 65 70 75 80

Arg Met Tyr Leu Arg Ala Ser Ile Arg Ala Leu Val Leu Asn Asp Thr  
 85 90 95

Leu Val Gln Val Lys Gly Phe Gly Ala Asn Gly Ser Phe Lys Leu Asn  
 100 105 110

Lys Lys Lys Leu Glu Lys Lys Pro Lys Lys Ala Ala Ser Lys Lys Ala  
 115 120 125

Thr Lys Lys Thr Glu Lys Pro Thr Ser Lys Lys Ala Val Thr Lys Lys  
 130 135 140

Val Ser Ala Lys Lys Ser Ala Lys Lys Ser Pro Val Lys Lys Lys Thr  
 145 150 155 160

Pro Lys Lys Thr Ser Val Lys Lys Ala Thr Ala Lys Pro Lys Lys Thr  
 165 170 175

Ala Ser Lys Lys Pro Lys Ala Ala Ala Lys Lys Lys Thr Lys Ser Lys  
 180 185 190

<210> 14



<211> 217  
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 <213> Xenopus laevis

<400> 14

Met Ala Leu Glu Leu Glu Glu Asn Leu His Ser Thr Glu Glu Glu Asp  
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Glu Glu Glu Glu Glu Glu Glu Gly Asp Glu Met Arg Ser Arg Ser Thr  
 20 25 30

Arg Asn Lys Gly Gly Ala Ala Ser Ser Ser Gly Asn Lys Lys Lys Lys  
 35 40 45

Lys Lys Lys Asn Gln Pro Gly Arg Tyr Ser Gln Leu Val Val Asp Thr  
 50 55 60

Ile Arg Lys Leu Gly Glu Arg Asn Gly Ser Ser Leu Ala Lys Ile Tyr  
 65 70 75 80

Ser Glu Ala Lys Lys Val Ser Trp Phe Asp Gln Gln Asn Gly Arg Thr  
 85 90 95

Tyr Leu Lys Tyr Ser Ile Lys Ala Leu Val Gln Asn Asp Thr Leu Leu  
 100 105 110

Gln Val Lys Gly Val Gly Ala Asn Gly Ser Phe Arg Leu Asn Lys Lys  
 115 120 125

Lys Leu Glu Gly Leu Pro Tyr Asp Lys Lys Pro Pro Pro Ala Lys Pro  
 130 135 140

Ser Ser Ser Ser Ser Ser Asn Lys Lys Gln Gln Gln Gly Pro Ser Ser  
 145 150 155 160

Ser Pro Ser Lys Ser His Lys Lys Ala Lys Pro Lys Ala Lys Ala Glu  
 165 170 175

Lys Glu Lys Pro Lys Thr Ser Ser Ala Lys Ala Lys Ser Pro Lys Lys  
 180 185 190

Ser Ala Ala Lys Gly Lys Lys Met Lys Lys Gly Ala Lys Pro Ser Val  
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Arg Lys Ala Pro Lys Ser Lys Lys Ala  
210 215

<210> 15  
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Met Ser Val Glu Leu Glu Glu Ala Leu Pro Pro Thr Ser Ala Asp Gly  
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20 25 30

Pro Lys Arg Arg Lys Asn Arg Lys Lys Asn Gln Pro Gly Lys Tyr Ser  
35 40 45

Gln Leu Val Val Glu Thr Ile Arg Lys Leu Gly Glu Arg Gly Gly Ser  
50 55 60

Ser Leu Ala Arg Ile Tyr Ala Glu Ala Arg Lys Val Ala Trp Phe Asp  
65 70 75 80

Gln Gln Asn Gly Arg Thr Tyr Leu Lys Tyr Ser Ile Arg Ala Leu Val  
85 90 95

Gln Asn Asp Thr Leu Leu Gln Val Lys Gly Thr Gly Ala Asn Gly Ser  
100 105 110

Phe Lys Leu Asn Arg Lys Lys Leu Glu Gly Gly Ala Glu Arg Arg Gly  
115 120 125

Ala Ser Ala Ala Ser Ser Pro Ala Pro Lys Ala Arg Thr Ala Ala Ala  
130 135 140

Asp Arg Thr Pro Ala Arg Pro Gln Pro Glu Arg Arg Ala His Lys Ser  
145 150 155 160

Lys Lys Ala Ala Ala Ala Ala Ser Ala Lys Lys Val Lys Lys Ala Ala  
165 170 175

Lys Pro Ser Val Pro Lys Val Pro Lys Gly Arg Lys

180

185

<210> 16  
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 <212> PRT  
 <213> Homo sapiens

<400> 16

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 1 5 10 15

Met Ala Lys Lys Val Thr Lys Ala Gly Gly Ser Ala Ala Leu Ser Pro  
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Ser Lys Lys Arg Lys Asn Ser Lys Lys Lys Asn Gln Pro Gly Lys Tyr  
 35 40 45

Ser Gln Leu Val Val Glu Thr Ile Arg Arg Leu Gly Glu Arg Asn Gly  
 50 55 60

Ser Ser Leu Ala Lys Ile Tyr Thr Glu Ala Lys Lys Val Pro Trp Phe  
 65 70 75 80

Asp Gln Gln Asn Gly Arg Thr Tyr Leu Lys Tyr Ser Ile Lys Ala Leu  
 85 90 95

Val Gln Asn Asp Thr Leu Leu Gln Val Lys Gly Thr Gly Ala Asn Gly  
 100 105 110

Ser Phe Lys Leu Asn Arg Lys Lys Leu Glu Gly Gly Gly Glu Arg Arg  
 115 120 125

Gly Ala Pro Ala Ala Ala Thr Ala Pro Ala Pro Thr Ala His Lys Ala  
 130 135 140

Lys Lys Ala Ala Pro Gly Ala Ala Gly Ser Arg Arg Ala Asp Lys Lys  
 145 150 155 160

Pro Ala Arg Gly Gln Lys Pro Glu Gln Arg Ser His Lys Lys Gly Ala  
 165 170 175

Gly Ala Lys Lys Asp Lys Gly Gly Lys Ala Lys Lys Thr Ala Ala Ala  
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Gly Gly Lys Lys Val Lys Lys Ala Ala Lys Pro Ser Val Pro Lys Val  
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Pro Lys Gly Arg Lys  
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<210> 17  
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<400> 17

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 1 5 10 15

<210> 18  
 <211> 25  
 <212> PRT  
 <213> Homo sapiens

<400> 18

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Ala Lys Ser Pro Lys Lys Ala Lys Ala  
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<210> 19  
 <211> 17  
 <212> PRT  
 <213> Trout

<400> 19

Lys Ala Val Ala Ala Lys Lys Ser Pro Lys Lys Ala Lys Lys Pro Ala  
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Thr

<210> 20  
 <211> 19  
 <212> PRT  
 <213> Catfish

<400> 20

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Arg Ser Ser

<210> 21  
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<220>  
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 <222> (19)..(19)  
 <223> Xaa can be any naturally occurring amino acid

<400> 21

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<210> 22  
 <211> 17  
 <212> PRT  
 <213> Bass

<400> 22

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 1 5 10 15

Thr

<210> 23  
 <211> 22  
 <212> PRT  
 <213> Bass

<400> 23

Pro Asp Pro Ala Pro Lys Thr Ala Pro Lys Lys Gly Ser Lys Lys Ala  
 1 5 10 15

Val Thr Lys Thr Ala Gly  
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<210> 24  
<211> 26  
<212> PRT  
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<400> 24

Ala Glu Val Ala Pro Ala Pro Ala Ala Ala Ala Pro Ala Lys Ala Pro  
1 5 10 15

Lys Lys Lys Ala Ala Ala Lys Pro Lys Lys  
20 25

<210> 25  
<211> 4  
<212> PRT  
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<220>  
<223> Synthetic Peptide

<400> 25

Ala Lys Lys Ala  
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<210> 26  
<211> 11  
<212> PRT  
<213> Ictalurus punctatus

<400> 26

Gly Ala Ser Gly Ser Phe Lys Leu Asn Lys Lys  
1 5 10

<210> 27  
<211> 21  
<212> PRT  
<213> Bacteria

<400> 27

Ala Tyr Ser Leu Gln Met Gly Ala Thr Ala Ile Lys Gln Val Lys Lys  
1 5 10 15

Leu Phe Lys Lys Trp  
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<210> 28  
<211> 28  
<212> PRT  
<213> Moth

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1 5 10 15

Arg Asp Gly Ile Ile Lys Ala Gly Pro Ala Val Ala  
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<211> 22  
<212> PRT  
<213> Spider

<400> 29

Phe Lys Phe Leu Ala Lys Lys Val Ala Lys Thr Val Ala Lys Gln Ala  
1 5 10 15

Ala Lys Gln Gly Ala Lys  
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<210> 30  
<211> 22  
<212> PRT  
<213> Toad

<400> 30

Ala Gly Arg Gly Lys Gln Gly Gly Lys Val Arg Ala Lys Ala Lys Thr  
1 5 10 15

Arg Ser Ser Arg Ala Gly  
20

<210> 31  
<211> 23  
<212> PRT  
<213> Frog

<400> 31

Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe  
1 5 10 15

Val Gly Glu Ile Met Asn Ser

20

<210> 32  
<211> 30  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (23)..(23)  
<223> Xaa can be any naturally occurring amino acid

<220>  
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<222> (26)..(26)  
<223> Xaa can be any naturally occurring amino acid

<400> 32

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20 25 30